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Visualization of Coronary Plaque *Vasa Vasorum* by Intravascular Ultrasound

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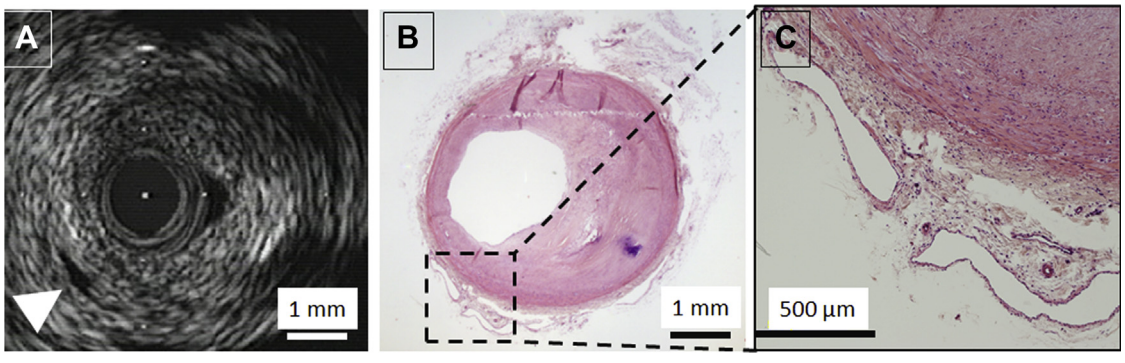

Figure 1. Intravascular Ultrasound Image and Histology of *Vasa Vasorum*

Intravascular ultrasound showed a small tubular, low-echoic structure exterior to media **(A, arrowhead)**. Histology confirmed *vasa vasorum* formation in the corresponding sections **(B and C)**.

A 90-year-old women died with acute peritonitis. After she died, the coronary artery was imaged by intravascular ultrasound (IVUS) (Atlantis SR Pro, 40 MHz, Boston Scientific, Natick, Massachusetts). IVUS visualized a small tubular, low-echoic structure exterior to media (Fig. 1A, arrowhead). Histology confirmed *vasa vasorum* formation in the corresponding sections (Figs. 1B and 1C).

The *vasa vasorum* of the coronary artery is a network of small blood vessels that supply coronary vessel wall and is known as 1 of the morphological characteristics of vulnerable plaque. The majority of *vasa vasorum* arises from the adventitia and penetrates the outer side of the coronary plaque. In general, the depth in IVUS images is around 8 to 10 mm and, therefore, is sufficient for visualizing *vasa vasorum*. The size of the *vasa vasorum* varies widely and IVUS could detect several hundred micrometers of the *vasa vasorum as a* tubular, low-echoic structure at the outer side of the coronary plaque.

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